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01/03

# HEART RATE MONITOR

**MD 4302**

## OPERATING MANUAL

MEDION®

## SAFETY INSTRUCTIONS

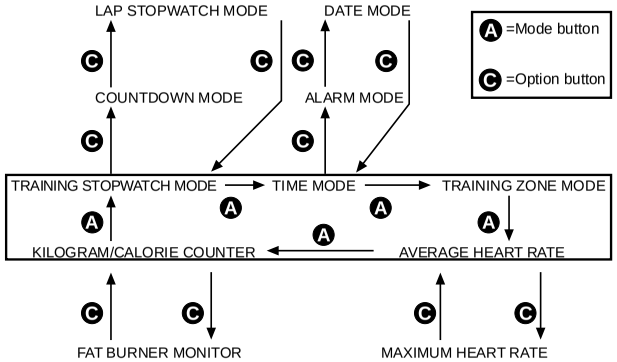
- The heart rate monitor is not a medical instrument. It is a training instrument that has been designed to monitor and indicate your heart rate, calorie consumption and fat burn.
- Before you begin your training program visit your doctor and consult him as to your individual upper and lower heart rate limit (training range), exercise frequency and duration. With these parameters of your current fitness level you will be able to achieve optimum results.
- Do not wear your heart rate monitor for sports where injuries are likely to occur.
- Read the operating manual through carefully and keep it for future reference as long as you have the heart rate monitor.
- **People who have heart and circulatory problems or wearers of heart pacemakers should consult their doctor before using this heart rate monitor.**

## CARE

Wipe the heart rate monitor and the transmitter down with a damp cloth after training.
Make sure the transmitting unit is stored in a dry place to prevent the batteries discharging.

Lift the flap!

## FLOW DIAGRAM




## BUTTON FUNCTIONS

Your heart rate monitor has four functional buttons.

## BUTTON FUNCTIONS

Never activate the function buttons under water, as moisture can then penetrate the housing.

The **A** mode button is used to switch between the different operating modes. Press the mode button briefly to move from the time mode into the training zone mode, the heart rate mode, kilocalorie mode, training stopwatch mode and back to the time mode.

The **B** set button is used to set the upper and lower heart rate, normal time, date, alarm time, countdown timer and calorie consumption parameters. In addition, the set button is used for starting the countdown function, training stopwatch function and lap stopwatch function.

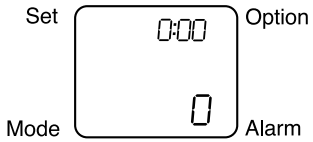
The **C** option button is used to switch between the individual options in the respective operating modes as follows.
You can move from the normal time mode to the alarm mode, the date mode and back to the normal time mode.
From the heart rate mode you can move from the average heart rate to the max. heart rate and back to the average heart rate.
From the training stopwatch mode you can move into the countdown mode, the lap stopwatch mode and back to the training stopwatch mode.

The **D** alarm button is used to activate a beeper when the button is touched or when you are no longer within the training range. Touch the alarm button to activate/deactivate the beep. A sound symbol appears in the display when the beeper is activated.

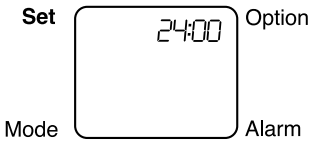
| | |
|---|---|
| Name: | |
| Normal pulse: | |
| Lower pulse limit: | |
| Upper pulse limit: | |

## SETTING THE TIME

The monitor must be in the time mode for the time to be set, i.e. the time is shown in the top right-hand corner and the current heart rate in the bottom right-hand corner of the display. If this is not the case, press the option button until you are in the correct operating mode. Then press the mode button to reach the time mode.



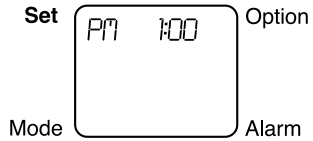

Once in the time mode, keep the set button pressed for approx. 2 seconds until the word "Hold" disappears from the display. Now press the set button to select between 12-hour and 24-hour display.



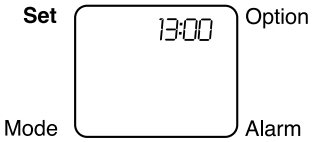

When 12-hour display is selected, the American calendar format month/date will be displayed automatically. When the 24-hour display is selected the European calendar format date/month is displayed. When setting the 12-hour clock make sure the display for AM (before noon) and PM (after noon) is correct.

Confirm your selection using the mode button, the clock will then appear with the hour figure flashing. Set the current hour using the set button.

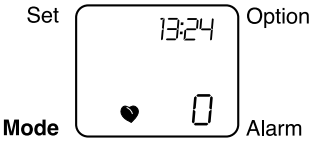
Or for 12-hour setting:




Press the mode button. The minute figure will begin to flash. Use the set button to set the minutes correctly.



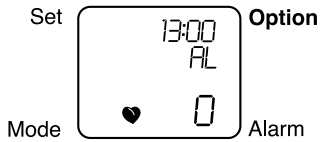

Return to the time mode by pressing the mode button.



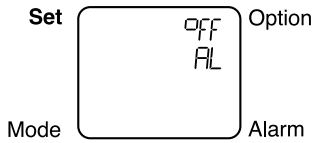



## SETTING THE ALARM TIME

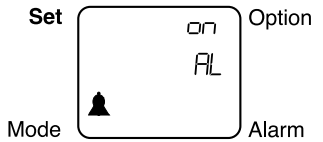
The monitor must be in alarm time mode for the alarm time to be set, i.e. the alarm time, the current heart rate and the letters "AL" can be seen on the display. If this is not the case, enter the time mode and press the option button to move into the alarm time mode.



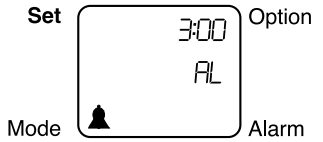

Once in the time mode, keep the set button pressed for approx. 2 seconds until the word "Hold" disappears from the display. Now press the set button to switch the alarm on (the word "on" and a bell symbol appear in the display) or off (the word "off" appears in the display).



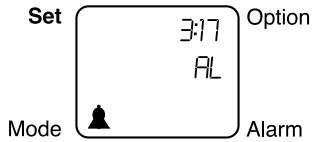

The bell symbol remains visible in all operating modes if the alarm has been switched on.



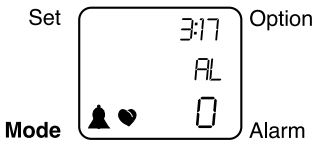

Confirm your selection using the mode button, the alarm clock will then appear with the hour figure flashing. Set the hour required by pressing the set button.




Press the mode button. The minute figure will begin to flash. Now use the set button to set the minutes.



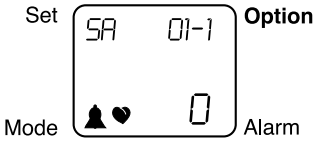

Return to the alarm time mode by pressing the mode button.



## SETTING THE DATE DISPLAY

Your heart rate monitor is equipped with a 50-year calendar which will calculate the weekday to the appropriate date until the year 2050.

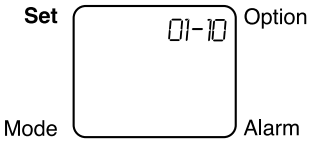
The monitor must be in the date mode for the date to be set, i.e. the date and the current heart rate are shown on the display. If this is not the case, enter the time mode and press the option button to reach the date mode.




Once in the date mode, keep the set button pressed for approx. 2 seconds until the word "Hold" disappears from the display. Now press the set button to set the year between the year 2000 and the year 2050.

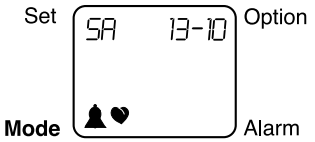
If you have selected the 12-hour display for the time, please note that the American calendar format month/date will be displayed automatically. If you have selected the 24-hour display, the European format date/month will be displayed.

Confirm your selection using the mode button, the date will then appear with the month figure flashing. Set the required month by pressing the set button.




Press the mode button. The date figure now flashes. Set the date using the set button.

Return to the date mode by pressing the mode button. The English abbreviation for the weekday is automatically displayed before the date.



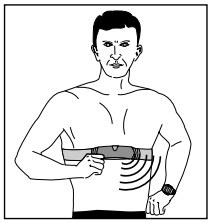

Weekday abbreviations:

MO = Monday, TU = Tuesday, WE = Wednesday,
TH = Thursday, FR = Friday, SA = Saturday,
SU = Sunday



## PUTTING ON THE TRANSMITTER AND THE HEART RATE MONITOR

The transmitter is worn on the naked skin. Set the elastic belt tight enough for the transmitter to be pressed to your chest.



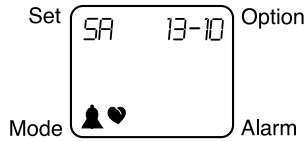
To achieve better skin contact, moisten the conductive transmission pad lightly with ECG jelly (from chemist stores). Put the belt on a few minutes before starting training so that it can warm up to body temperature. Find the best position for the belt. The contact between the skin and the transmitter must not be interrupted when deep breaths are taken.

Fasten the heart rate monitor on your wrist.
Press any button to activate the monitor. If there is no interference the heart signal will flash with the received transmission signals.

It can take a few seconds for a heart rate to appear.
Vary the position of the transmitter if necessary to achieve optimum contact.

## HEART RATE DISPLAY

The heart symbol flashes in the display when your heart rate monitor is receiving signals from the transmitter.



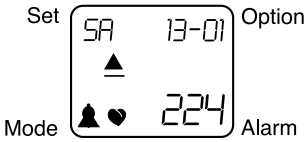

## TRANSMISSION FREQUENCY INTERFERENCE

Battery-operated heart rate monitors can be influenced by interference from external radio frequencies. Electronic training devices in fitness clubs, mobile phones, battery-operated bike computers, high-voltage lines etc. can cause irregular transmission impulses and lead to the display showing "0" during training. When training takes place in groups, other heart rate transmitters can overlay your signal causing an incorrect heart rate display. To achieve correct signals, keep a distance of approx. 2 metres between yourself and other users of heart rate monitors.

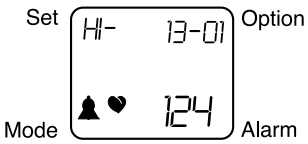
## SETTING THE TRAINING RANGE

The heart rate monitor makes it possible for you to set a specific training range with upper and lower heart rate limit value.

During training, your current heart rate is shown in the display. A flashing value and an arrow pointing upwards or downwards indicate that you are outside your set training range. In addition, an acoustic alarm can be set. The arrows disappear as soon as your current value is within the training range again.




The monitor must be in the training zone mode for the training limits to be set, i.e. the display alternates between how long you were in the upper (HI), lower (LO) and required (In) training range. If this is not the case, enter the time mode and press the mode button to move into the training zone mode.




Use your maximum heart rate (MHR) to calculate your training limit values. Contact your doctor or your trainer to determine your maximum heart rate. If you do not know your maximum heart rate, you can estimate it using the following formula:

MEN: 220 minus age = Maximum heart rate (MHR)
WOMEN: 230 minus age = Maximum heart rate (MHR)

Calculate the upper and lower limit values of your training form by multiplying your maximum heart frequency by the factors listed in the following.
Select the training form you require.

## CAUTION!

The training forms given with the different heart rate ranges are only examples. You must discuss your personal training form with your personal heart rate ranges with your doctor or a qualified trainer.



**TRAINING FORM - KEEPING FIT**

Formula: lower limit value: MHR x 0.50
upper limit value: MHR x 0.65

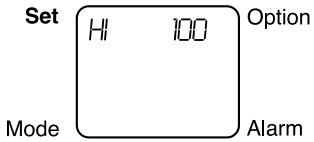
**TRAINING FORM - STAMINA TRAINING**

Formula: lower limit value: MHR x 0.65
upper limit value: MHR x 0.80

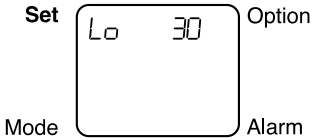
**TRAINING FORM - MAXIMUM LOAD**

Formula: lower limit value: MHR x 0.80
upper limit value: MHR x 0.95

Keep the set button pressed for approx. 2 seconds in the training time mode until the word "Hold" disappears from the display. Now press the set button to set the upper limit value between 100 and 240.




Confirm your selection using the mode button, the lower limit value will then appear flashing.
Press the set button to set the required lower limit value between 30 and 179.

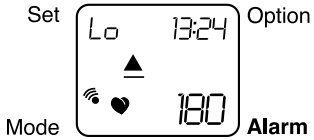



You cannot set a lower limit value that is higher than the upper limit value. In this case the upper limit value will reappear on the display so that you can reset it.

Return to the training zone mode by pressing the mode button.

## WARNING SIGNAL FOR THE TRAINING ZONE

Exceeding or falling below the set limit values can be indicated by an acoustic signal in addition to the optical display. Press the alarm button to activate or deactivate the acoustic signal. A sound symbol appears in the display when the acoustic signal has been activated.

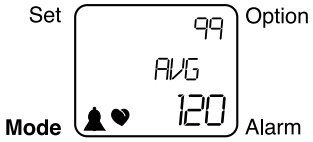



When the acoustic signal has been activated, an appropriate signal is given every six seconds if your pulse rate is above or below the limit values.

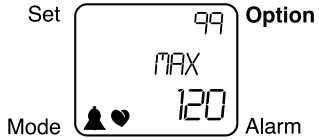
## HEART RATE DISPLAY MODE

Your heart rate monitor enables you to read off your average and maximum heart rate and thus to adapt your training optimally and avoid overstrain.

The monitor must be in the heart rate display mode for you to be able to view the average or maximum heart rate, i.e. the average heart rate is indicated in the top right-hand corner, the current heart rate in the bottom right-hand corner and the letters "AVG" can be seen in the display.
If this is not the case, enter the time mode and press the mode button to move into the heart rate display mode.




Once in the heart rate display mode, press the option button, the maximum heart rate value will appear in the top right-hand corner and the letters "MAX" will be on the display.




Return to the heart rate display mode be repressing the option button.

## CALORIE CONSUMPTION MODE

The monitored heart rate is used to calculate the calorie consumption and the fat burn achieved if the training stopwatch is switched on. For these values to be calculated accurately, your gender, weight and current activity must be entered. Proceed as follows:

To set the data, the monitor must be in the kilocalorie mode, i.e. the calories used will be displayed in the top right-hand corner, underneath this the current heart rate and the letters "KCAL" will also appear. If this is not the case, enter the time mode and press the mode button to reach the kilocalorie mode.

Once in the kilocalorie mode keep the set button pressed for approx. 2 seconds until the word "Hold" disappears from the display. Now press the set button to select your gender between "M" for male and "F" for female.

Confirm your selection using the mode button and the weight value will appear flashing. Set your actual weight between 20kg and 225kg by pressing the set button.
Use the option button to choose between kilograms and English pounds (454g).

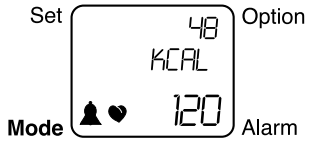
Press the mode button. The calorie parameters appear flashing. Use the set button to set the calorie parameters between the values 00010 and 00131.

Some examples for the different calorie parameters:

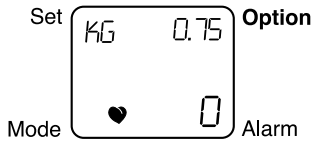
| | | | |
|---|---|---|---|
| Aerobics | 0.00047 – 0.00061 | Climbing | 0.00055 |
| Badminton | 0.00044 | Running | 0.00074 – 0,00131 |
| Basketball | 0.00063 | Cycling | 0.00029 – 0.00079 |
| Football | 0.00060 | Swimming | 0.00028 – 0.00078 |
| Gardening work | 0.00025 – 0.00057 | Skiing | 0.00052 – 0.00074 |
| Handball | 0.00063 | Squash | 0.00096 |
| Jogging | 0.00036 – 0.00069 | Tennis | 0.00050 |
| Canoeing | 0.00020 – 0.00047 | Circuit training | 0.00039 – 0.00060 |

These calorie parameters are approximate values which are to be used for reference. You should decide what factor to enter yourself, since you can carry out all of these sports with different intensities.
Calorie consumption is only monitored from a heart rate of more than 100 beats/minute and only after the training stopwatch has been started.

Return to the kilocalorie mode by pressing the mode button. Here you can read off the number of kilocalories used while the monitor is running in the training stopwatch mode.




Press the option button to read off the fat burn to the nearest 10 grams during your training sequence. The maximum display is 1.30 kg.

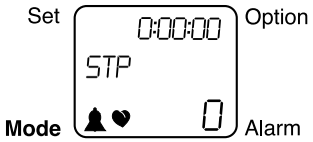



If you have given your weight in lb (English pounds) then your fat burn will also be given in pounds.

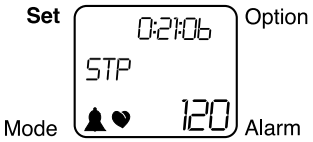
## TRAINING STOPWATCH MODE

Your heart rate monitor is equipped with a training stopwatch which can be used to read off times up to 9 hours, 59 minutes and 59 seconds.

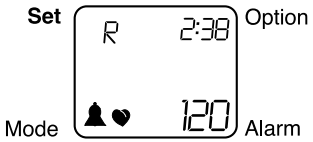
The monitor has to be in the training stopwatch mode in order to start the training stopwatch running, i.e. the training time is displayed in the top right-hand corner, under this the heart rate and the letters "STP" will appear.
If this is not the case, enter the time mode and press the mode button to reach the training stopwatch mode.



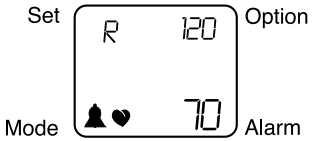

Once in the training stopwatch mode, press the set button to set the training time and thus your training sequence.




When the set button is pressed again a beep can be heard and a rest phase of 3 minutes will begin. The training time you stopped remains displayed for another 5 seconds.
Then the rest countdown time will appear and count down to 0 automatically.




4 beeps will sound at the end of the rest period. The stored heart rate will be displayed in the top line in comparison with the current heart rate in the bottom line.




By keeping the set button pressed for more than 2 seconds you will return the training time to 0:00:00.

When the training time is reset, the heart rate memory is deleted and your heart rate monitor is ready for the next training sequence to begin.

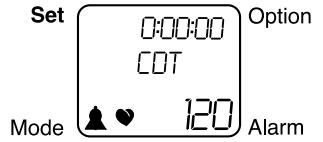


## SET AND START COUNTDOWN TIMER MODE

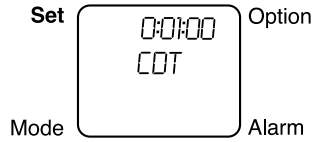
Your heart rate monitor enables you to program a countdown timer from 1 minute to 9 hours and 59 minutes.

The monitor must be in the countdown mode for the countdown timer to be set, i.e. the countdown timer is indicated in the top right-hand corner of the display, under it the current heart rate and the letters "CDT". If this is not the case, enter the time mode and press the mode button to enter the training stopwatch mode and then the option mode to reach the countdown mode.

Once in the countdown mode, keep the mode button pressed for 2 seconds until the word "Hold" disappears from the display. Now press the set button to set the number of hours between 0 and 9.

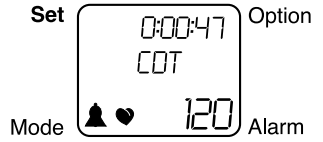



Confirm your selection using the mode button, the minute display will begin to flash.
Now press the set button to set the minutes.




Return to the countdown mode by pressing the mode button.

Start or stop the countdown timer by pressing the set button. By keeping the set button pressed, the countdown timer is reset to the initial value you set.

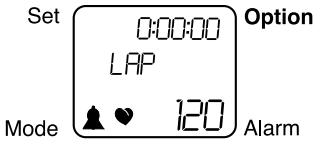



After the countdown time has run down, the display stays at 0:00:00 and an acoustic signal is given. The countdown timer can only be reset to the value you set initially by keeping the set button pressed for some time.

## LAP TIME STOPWATCH MODE

Your heart rate monitor has a lap time stopwatch for up to 16 training laps.

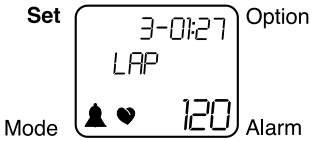
The monitor must be in the lap time stopwatch mode for the lap timer to be set, i.e. the lap number and the lap time are indicated in the top right hand corner of the display, under it the current heart rate and the letters "LAP".
If this is not the case, enter the time mode and press the mode button to enter the training stopwatch mode and then the option button to reach the lap stopwatch mode.




Once in the lap stopwatch mode, press the set button to start measurement of the lap time.

Press the set button to start measurement of the time for the current lap.

Press the set button again to end the time measurement for the current lap. The stopwatch automatically begins time measurement for the next lap.




The maximum lap time is 99 minutes and 59 seconds. The time displayed then begins at 00:00 again.

If you press the mode button the time measurement will be stopped without continuing automatically with the next lap.

Press the set button to start the time measurement for the next lap or press the option button to leave the lap time mode again.

Keep the set button pressed for more than 2 seconds to return the lap time mode to its original state.

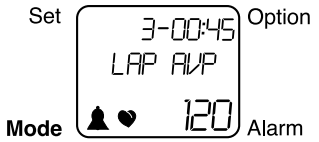


## LAP TIME MEMORY

After training, you have the possibility of reading off the training values for the total time for all laps and the total number of laps with the average time for all laps as well as the respective average heart rate from the lap time memory. In addition you can request the times of the individual laps with the respective average heart rate.

The monitor must be in the lap stopwatch mode for the lap memory to be requested, i.e. the lap number and the lap time are visible in the top right-hand corner of the display, under this the current heart rate and the letters "LAP".
If this is not the case, enter the time mode and press the mode button to enter the training stopwatch mode and then the option button to reach the lap time mode.

Once in the lap time mode keep the mode button pressed for approx. 2 seconds to start the lap time memory.

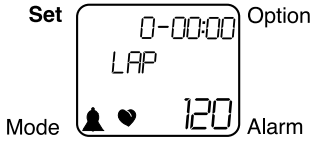



The overall lap time and the total number of laps will now be displayed at 2 second intervals with the average time for all laps as well as the respective average heart rate from the lap time memory.

Press the set button to indicate the average heart rate and the time stopped for every lap. Change between the individual lap by pressing the set button.

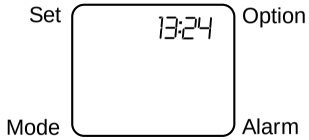
Press the mode button to leave the lap time memory and return to the lap time mode.

Keep the set button pressed for longer than 2 seconds to delete the lap time memory.



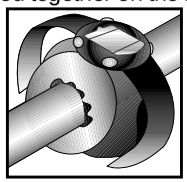
## ENERGY-SAVING MODE

If no signal is received for approx. 5 minutes, your heart rate monitor will automatically switch to the energy-saving mode and the present time will be displayed. Press any button to "wake up" your monitor again, you will then be back in the training stopwatch mode.




## FITTING YOUR HEART RATE MONITOR TO BIKE HANDLEBARS

Place the bracket included onto the handlebars. Fasten the heart rate monitor around the bracket and tighten the band until the bracket is pressed together on the handlebars.



## TROUBLESHOOTING

Heart rate is not displayed
- Check the position of the transmitter
- Is the transmitter too far from the receiver (monitor)?
- Are there electronic sources of interference spoiling perfect transmission
- Does the transmitter need a new battery?

The display is black
- The ambient temperature is outside the operating range (0° to 55°C )

The display is empty
- The receiver needs a new battery. Replace it as soon as possible.

Reset - resetting the receiver
1. Keep all 4 buttons pressed for approx. 3 seconds.
2. Press the set button. The clock then counts down from 3 to 0.
3. Press the mode button and then the option button.

Your heart rate monitor is now in its delivery state.



## TECHNICAL DATA

Batteries:

| | |
|---|---|
| Receiver: | 1 x CR 2032 3V |
| Transmitter: | 1 x CR 2032 3V |

Transmission frequency: 5,3 KHz

Subject to technical modifications!

## GUARANTEE

Dear Customer,

Our Medion service team will gladly help you on all questions concerning your new heart rate monitor.

Please call the help line below first, as many minor problems can be solved over the phone. Defective heart rate monitor should be sent to your regional service center with an enclosed copy of your sales receipt.

For packing please use the original box only.

The guarantee applies only to faulty materials and workmanship and does not cover damage to breakable parts. Any improper treatment, use of force or tampering by unauthorised people shall cause the guarantee to be invalid.

This guarantee does not affect your statutory rights.

Charges will be made for any repairs performed after expiry of the guarantee.

**If you require help operating your heart rate monitor, please contact the help line on 0870 7270370 • Fax: 01793 715716 or e-mail: hotline@medion.co.uk**

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